CLAIMS

What is claimed is:

5   1. A method for acknowledging a wireless data discarding
request transmitted by a first station to a second station
for requesting the second station to discard at least a layer
2 service data unit (SDU), the method comprising:
       generating a layer 2 data discard acknowledgment protocol
10   data unit (PDU), the layer 2 data discard acknowledgment
           PDU comprising a first field that enables the first
           station to determine layer 2 SDUs discarded by the second
           station; and
       transmitting the layer 2 data discard acknowledgment PDU
15   to the first station.

2. A method according to claim 1 wherein each layer 2 SDU to
be discarded has a terminating layer 2 PDU that holds a
terminating end of the layer 2 SDU, and the first field
20 indicates the number of terminating layer 2 PDUs discarded
by the second station.

3. A method according to claim 1 wherein the first field
indicates the number of layer 2 SDUs discarded by the second
25 station.

4. A method according to claim 1 wherein the first field
indicates the number of layer 2 PDUs discarded by the second
station when discarding the layer 2 SDUs.
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5. A method according to claim 1 wherein the first field
comprises a bitmap that indicates a discard state for each

layer 2 SDU to be discarded.

6. A method according to claim 1 wherein the layer 2 data discard acknowledgement PDU further comprises a second field for indicating a starting sequence number for an updated receiving window of the second station, and a third field for indicating discarding of layer 2 SDU data within a PDU having the starting sequence number.

7. A method according to claim 1 wherein the first station comprises a layer 2 interface and a layer 3 interface, and the first field in the layer 2 acknowledgment PDU enables the layer 2 interface to inform the layer 3 interface of the number of layer 2 SDUs discarded by the second station.

8. A wireless communications system comprising:
    a first station capable of transmitting a data discarding request, the data discarding request being used to request discarding of at least a layer 2 service data unit (SDU); and
    a second station capable of receiving the data discarding request and sending a layer 2 data discard acknowledgment protocol data unit (PDU), the layer 2 data discard acknowledgment PDU comprising a first field that enables the first station to determine layer 2 SDUs discarded by the second station.

9. A wireless communications system according to claim 8 wherein each layer 2 SDU to be discarded has a terminating layer 2 PDU that holds a terminating end of the layer 2 SDU, and the first field indicates the number of terminating layer 2 PDUs discarded by the second station.

10. A wireless communications system according to claim 8 wherein the first field indicates the number of layer 2 SDUs discarded by the second station.

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11. A wireless communications system according to claim 8 wherein the first field indicates the number of layer 2 PDUs discarded by the second station when discarding the layer 2 SDUs.

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12. A wireless communications system according to claim 8 wherein the first field comprises a bitmap that indicates a discard state for each layer 2 SDU to be discarded.

15 13. A wireless communications system according to claim 8 wherein the layer 2 data discard acknowledgement PDU further comprises a second field for indicating a starting sequence number for an updated receiving window of the second station, and a third field for indicating discarding of layer 2 SDU

20 data within a layer 2 PDU having the starting sequence number.

14. A wireless communications system according to claim 8 wherein the first station comprises a layer 2 interface and a layer 3 interface, and the first field in the layer 2 data

25 discard acknowledgment PDU enables the layer 2 interface to inform the layer 3 interface of the number of layer 2 SDUs discarded by the second station.